

Mr. David Brayton
Colwell/General, Inc.
P.O. Box 218
Kendallville, Indiana 46755

Re: **113-11120**
Significant Source Modification to:
Part 70 permit No.: **T113-6020-00019**

Dear Mr. Brayton:

Colwell/General, Inc. was issued Part 70 operating permit T113-6020-00019 on October 6, 1998, for a paper coating and offset printing presses operation producing paint chips and stripe cards. Applications to modify the source were received on May 20, 1999, and July 2, 1999. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

- (5) one (1) curing oven and rollcoating paper coating application system, identified as CC-1, equipped with one (1) 1.35 million (MM) British thermal units (Btu) per hour, natural gas-fired burner for the curing oven, with a maximum throughput of 36 pounds of coating per hour to coat a maximum of 41.8 pounds of paper per hour, with VOC emissions controlled by an existing thermal oxidizer, identified as TO-1, exhausting through one (1) stack, identified as #S1;
- (6) one (1) curing oven and rollcoating paper coating application system, identified as S-4, with a maximum throughput of 425 pounds of coating per hour to coat a maximum of 1,079 pounds of paper per hour, with VOC emissions controlled by a new thermal oxidizer, identified as TO-2, exhausting through one (1) stack, identified as #TO-2; and
- (7) one (1) thermal oxidizer, identified as TO-2, using natural gas as a supplementary fuel at a maximum heat input rate of 3.0 million (MM) British thermal units (Btu) per hour, exhausting through one (1) stack, identified as #TO-2. The curing oven on the S-4 coating line is powered through heat recovery from this thermal oxidizer.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

- 1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).
- 2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The proposed operating conditions applicable to these emission units are attached to this Source Modification approval. These proposed operating conditions shall be incorporated into the Part 70 operating permit as an administrative amendment in accordance with 326 IAC 2-7-10.5(l)(1) and 326 IAC 2-7-11.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call Trish Earls at (973) 575-2555, ext. 3219, or call (800) 451-6027, press 0 and ask for extension 3-6878.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
TE/EVP

cc: File - Noble County
U.S. EPA, Region V
Noble County Health Department
Air Compliance Section Inspector Doyle Houser
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

PART 70 OPERATING PERMIT OFFICE OF AIR MANAGEMENT

**Colwell/General, Inc.
231 South Progress Drive East
Kendallville, Indiana 46755**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T113-6020-00019	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Management	Issuance Date: October 6, 1998
First Significant Source Modification: 113-11120	Pages Affected: 3, 3a, 4, 4a, 26, 27, 27a-27g, 31, 31a, 31b
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

C.9 Performance Testing [326 IAC 3-6]

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

- C.10 Compliance Schedule [326 IAC 2-7-6(3)]
- C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]
- C.12 Maintenance of Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]
- C.13 Monitoring Methods [326 IAC 3]
- C.14 Pressure Gauge Specifications

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

- C.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
- C.16 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]
- C.17 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5]
- C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- C.19 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)]
- C.20 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]
- C.21 General Record Keeping Requirements [326 IAC 2-7-5(3)]
- C.22 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

Stratospheric Ozone Protection

- C.23 Compliance with 40 CFR 82 and 326 IAC 22-1

D.1 FACILITY OPERATION CONDITIONS - four (4) paper coating lines, S-1, S-3, S-2, and CC-1, and one (1) can washing line

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-5]
- D.1.2 PSD Minor Limit [326 IAC 2-2][40 CFR 52.21]
- D.1.3 Hazardous Air Pollutants (HAPs) [326 IAC 2-4.1-1]
- D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

- D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]
- D.1.6 Volatile Organic Compounds (VOC)
- D.1.7 Volatile Organic Compounds (VOC)

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- D.1.8 Volatile Organic Compound Control

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- D.1.9 Record Keeping Requirements
- D.1.10 Reporting Requirements

D.2 FACILITY OPERATION CONDITIONS - one (1) paper coating line, S-4

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-5]
- D.2.2 PSD Minor Limit [326 IAC 2-2][40 CFR 52.21]
- D.2.3 New Source Toxics Control [326 IAC 2-4.1-1]
- D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

- D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]
- D.2.6 Volatile Organic Compounds (VOC)

- D.2.7 Volatile Organic Compounds (VOC)
- D.2.8 New Source Toxics Control [326 IAC 2-4.1-1]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- D.2.9 Volatile Organic Compound Control

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- D.2.10 Record Keeping Requirements
- D.2.11 Reporting Requirements

Certification

Emergency/Deviation Occurrence Report

Quarterly Reports

Quarterly Compliance Monitoring Report

SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary paper coating and offset printing presses operation producing paint chips and stripe cards.

Responsible Official: David Brayton
Source Address: 231 South Progress Drive East, Kendallville, Indiana 46755-3269
Mailing Address: P.O. Box 218, Kendallville, Indiana 46755-0218
Phone Number: 219-347-1981
SIC Code: 2752
County Location: Noble
County Status: Attainment for all criteria pollutants
Source Status: Part 70 Permit Program
Major Source, under PSD Rules;
Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (1) one (1) paper coating line, S-1, with a maximum throughput of 35 gallons of coatings per hour. Emissions shall be controlled by direct flame incinerator, TO-1, (capacity details listed under insignificant activity (1)), then exhausted at Stack/Vent ID #S1;
- (2) one (1) paper coating line, S-3, with a maximum throughput of 35 gallons of coatings per hour. Emissions shall be controlled by a thermal oxidizer, TO-1, then exhausted at Stack/Vent ID #S1;
- (3) one (1) paper coating line, S-2, with a maximum throughput of 432 pounds of coating per hour. Emissions shall be controlled by a thermal oxidizer, TO-1, then exhausted at Stack/Vent ID #S1;
- (4) one (1) enclosed can washer with recirculating solvent, with suspended VOC exhausted to and controlled by a thermal oxidizer, TO-1, then exhausted at Stack/Vent ID #S1; and
- (5) one (1) curing oven and rollcoating paper coating application system, identified as CC-1, equipped with one (1) 1.35 million (MM) British thermal units (Btu) per hour, natural gas-fired burner for the curing oven, with a maximum throughput of 36 pounds of coating per hour to coat a maximum of 41.8 pounds of paper per hour, with VOC emissions controlled by an existing thermal oxidizer, identified as TO-1, exhausting through one (1) stack, identified as #S1;
- (6) one (1) curing oven and rollcoating paper coating application system, identified as S-4, with a maximum throughput of 425 pounds of coating per hour to coat a maximum of 1,079 pounds of paper per hour, with VOC emissions controlled by a new thermal oxidizer, identified as TO-2, exhausting through one (1) stack, identified as #TO-2; and

- (7) one (1) thermal oxidizer, identified as TO-2, using natural gas as a supplementary fuel at a maximum heat input rate of 3.0 million (MM) British thermal units (Btu) per hour, exhausting through one (1) stack, identified as #TO-2. The curing oven on the S-4 coating line is powered through heat recovery from this thermal oxidizer.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]
[326 IAC 2-7-5(15)]

This stationary source does not currently have any insignificant activities, as defined in 326 IAC 2-7-1 (21) that have applicable requirements.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (1) one (1) paper coating line, S-1, with a maximum throughput of 35 gallons of coatings per hour. Emissions shall be controlled by direct flame incinerator, TO-1, (capacity details listed under insignificant activity (1)), then exhausted at Stack/Vent ID #S1;
- (2) one (1) paper coating line, S-3, with a maximum throughput of 35 gallons of coatings per hour. Emissions shall be controlled by a thermal oxidizer, TO-1, then exhausted at Stack/Vent ID #S1;
- (3) one (1) paper coating line, S-2, with a maximum throughput of 432 pounds of coating per hour. Emissions shall be controlled by a thermal oxidizer, TO-1, then exhausted at Stack/Vent ID #S1;
- (4) one (1) enclosed can washer with recirculating solvent, with suspended VOC exhausted to and controlled by a thermal oxidizer, TO-1, then exhausted at Stack/Vent ID #S1; and
- (5) one (1) curing oven and rollcoating paper coating application system, identified as CC-1, equipped with one (1) 1.35 million (MM) British thermal units (Btu) per hour, natural gas-fired burner for the curing oven, with a maximum throughput of 36 pounds of coating per hour to coat a maximum of 41.8 pounds of paper per hour, with VOC emissions controlled by an existing thermal oxidizer, identified as TO-1, exhausting through one (1) stack, identified as #S1.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-5]

- (a) Pursuant to 326 IAC 8-2-5 (Paper Coating Operations), no owner or operator of a coating line subject to this section may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of two and nine-tenths (2.9) pounds per gallon excluding water, delivered to the coating applicator from a paper, plastic, metal foil, or pressure sensitive tape/labels coating line.
- (b) When operating the thermal oxidizer (TO-1) to achieve the limit for rule 326 IAC 8-2-5, 2.9 pounds of VOC emitted to the atmosphere per gallon of coating less water delivered to the applicator, the thermal oxidizer shall maintain a minimum 94.0% overall efficiency. This efficiency is required by the rule 326 IAC 8-1-2 (a)(2). Based upon 326 IAC 8-1-2 (c) and the overall control efficiency of 94.0%, the VOC content of the coating shall not exceed 18.1 pounds per gallon of coating solids delivered to the applicator.

D.1.2 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The usage of VOC, including coatings, dilution solvents, and cleaning solvents, in the rollcoating paper coating application system, identified as CC-1, shall be limited to 81.96 tons per twelve (12) consecutive month period, rolled on a monthly basis. VOC emissions from the rollcoating paper coating application system shall be controlled by the thermal oxidizer, identified as TO-1, that maintains a minimum overall control efficiency of 94.0%. This limit will render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.1.3 Hazardous Air Pollutants (HAPs) [326 IAC 2-4.1-1]

The total input of any single HAP and any combination of HAPs, including coatings, dilution solvents, and cleaning solvents, to the rollcoating paper coating application system, CC-1, shall be limited to 165 and 400 tons per twelve (12) consecutive month period, rolled on a monthly basis, respectively. HAP emissions from the rollcoating paper coating application system shall be controlled by the thermal oxidizer, TO-1, that maintains a minimum overall control efficiency of 94.0%. These limits shall render the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control) not applicable.

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

Compliance Determination Requirements

D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

The Permittee shall perform VOC testing on the 9.4 MM Btu/hr thermal oxidizer, TO-1, by a method approved by the Commissioner, to determine the minimum operating temperature that will achieve 94.0% overall efficiency for this incinerator. Since the initial test required by this permit was performed within 6 months after issuance of this permit, this test shall not be required until five (5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.1.6 Volatile Organic Compounds (VOC)

Compliance with the VOC content contained in Condition D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.7 Volatile Organic Compounds (VOC)

The thermal oxidizer, TO-1, shall be in operation at all times when any of the paper coating lines (S-1, S-2, S-3, or CC-1) or the can washing line is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.8 Volatile Organic Compound Control

When operating, the thermal oxidizer shall maintain a minimum operating temperature of 1400°F or a temperature, fan amperage, and duct velocity determined in the most recent compliance stack tests to maintain at least 94.0% overall control efficiency. The temperature of the burner of the thermal oxidizer shall be continuously monitored and recorded whenever any of the facilities are in operation. Compliance with this condition shall deem 326 IAC 8-2-5 satisfied.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.9 Record Keeping Requirements

(a) The Permittee shall maintain records of the materials used that contain any VOCs. The records shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in condition D.1.1. The records shall contain, as a minimum, the following information:

- (1) The weight of VOC-containing material used, including purchase orders and invoices necessary to verify the type and amount used.
- (2) The VOC content (weight and volume percent) of each material used.

- (3) The weight of VOCs emitted for each compliance period, considering capture and destruction (or removal) efficiency.
- (4) Operational parameters of the VOC emission control equipment, considering capture and destruction (or removal) efficiency.
- (5) Operational parameters of the VOC emission control equipment, such as:
 - (i) Capture efficiency;
 - (ii) Destruction (or removal) efficiency;
 - (iii) Data used to establish the capture and destruction (or removal) efficiencies; and
 - (iv) Temperature readings.
- (b) To document compliance with Conditions D.1.2 and D.1.3, the Permittee shall also maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP usage limits and/or the VOC and HAP emission limits for the CC-1 coating line established in Conditions D.1.2 and D.1.3.
 - (1) The amount, the VOC content, and the HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (2) A log of the dates of use;
 - (3) The volume weighted VOC and HAP content of the coatings used for each month;
 - (4) The cleanup solvent usage for each month;
 - (5) The total VOC and HAP usage for each month; and
 - (6) The weight of VOCs and HAPs emitted for each compliance period.

D.1.10 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.2 and D.1.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (6) one (1) curing oven and rollcoating paper coating application system, identified as S-4, with a maximum throughput of 425 pounds of coating per hour to coat a maximum of 1,079 pounds of paper per hour, with VOC emissions controlled by a new thermal oxidizer, identified as TO-2, exhausting through one (1) stack, identified as #TO-2; and
- (7) one (1) thermal oxidizer, identified as TO-2, using natural gas as a supplementary fuel at a maximum heat input rate of 3.0 million (MM) British thermal units (Btu) per hour, exhausting through one (1) stack, identified as #TO-2. The curing oven on the S-4 coating line is powered through heat recovery from this thermal oxidizer.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-5]

- (a) Pursuant to 326 IAC 8-2-5 (Paper Coating Operations), no owner or operator of a coating line subject to this section may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of two and nine-tenths (2.9) pounds per gallon excluding water, delivered to the coating applicator from a paper, plastic, metal foil, or pressure sensitive tape/labels coating line.
- (b) When operating the thermal oxidizer (TO-2) to achieve the limit for rule 326 IAC 8-2-5, 2.9 pounds of VOC emitted to the atmosphere per gallon of coating less water delivered to the applicator, the thermal oxidizer shall maintain a minimum 95.0% overall efficiency. This efficiency exceeds the minimum overall control efficiency required by the rule 326 IAC 8-1-2 (a)(2).

D.2.2 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The usage of VOC, including coatings, dilution solvents, and cleaning solvents, in the rollcoating paper coating application system, identified as S-4, shall be limited to 681.62 tons per twelve (12) consecutive month period, rolled on a monthly basis. VOC emissions from the rollcoating paper coating application system shall be controlled by the thermal oxidizer, identified as TO-2, that maintains a minimum overall control efficiency of 95.0%. This limit will render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.2.3 New Source Toxics Control [326 IAC 2-4.1-1]

Pursuant to the MACT determination under 326 IAC 2-4.1-1, operating conditions for the new rollcoating paper coating application system, identified as S-4, shall be any one or combination of the following:

- (a) At least 95 percent overall organic HAP control efficiency (capture and control) using an add-on control device for emissions from a coating line, as calculated over a calendar month; or
- (b) no more than 0.20 kg HAP applied per kg coating solids applied, as calculated on a weighted average basis for each calendar month for all coatings used; or
- (c) no more than 0.20 kg HAP emitted per kg coating solids applied, as calculated on a weighted average basis for all coatings used each calendar month.

This source will use the thermal oxidizer, identified as TO-2, to comply with paragraph (a) of this condition.

D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

Compliance Determination Requirements

D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

To demonstrate compliance with the minimum 95% overall control efficiency required by condition D.2.1, during the period between 0 and 6 months after issuance of Significant Source Modification No. 113-11120-00019, the Permittee shall perform VOC testing on the thermal oxidizer, TO-2, by a method approved by the Commissioner, to determine the minimum operating temperature that will achieve 95.0% overall efficiency for this oxidizer. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance. Compliance with this condition can coincide with compliance with condition D.2.8.

D.2.6 Volatile Organic Compounds (VOC)

Compliance with the VOC content limit contained in Condition D.2.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.2.7 Volatile Organic Compounds (VOC)

The thermal oxidizer, TO-2, shall be in operation at all times when the paper coating line (S-4) is in operation.

D.2.8 New Source Toxics Control [326 IAC 2-4.1-1]

To demonstrate compliance with the 95% overall organic HAP control efficiency requirement in Condition D.2.3(a), the Permittee shall follow the procedures in either paragraph (a) or (b) of this condition:

- (a) Demonstrate initial compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters by following the procedures listed below:
 - (1) An initial performance test to establish the destruction efficiency (E) and the associated combustion zone temperature for the thermal oxidizer TO-2 shall be conducted and the data reduced in accordance with the following reference methods and procedures:
 - (i) Method 1 or 1A of 40 CFR part 60, appendix A is used for sample and velocity traverses to determine sampling locations.
 - (ii) Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A is used to determine gas volumetric flow rate.
 - (iii) Method 3 of 40 CFR part 60, appendix A is used for gas analysis to determine dry molecular weight.
 - (iv) Method 4 of 40 CFR part 60, appendix A is used to determine stack gas moisture.

- (v) Methods 2, 2A, 3, and 4 of 40 CFR part 60, appendix A shall be performed, as applicable, at least twice during each test period.
 - (vi) Method 25 of 40 CFR part 60, Appendix A, shall be used to determine organic volatile matter concentration, except as provided in (A) to (C) below. The Permittee shall submit notice of the intended test method to IDEM, OAM for approval along with notice of the performance test that conforms to the schedule and procedures in 40 CFR 63.7(c) (General Provisions). The Permittee may use Method 25A of 40 CFR Part 60, Appendix A, if:
 - (A) An exhaust gas organic volatile matter concentration of 50 parts per million by volume (ppmv) or less is required to comply with Condition D.2.3(a); or
 - (B) The organic volatile matter concentration at the inlet to the control system and the required level of control are such to result in exhaust gas organic volatile matter concentrations of 50 ppmv or less, or
 - (C) Because of the high efficiency of the control device, the anticipated organic volatile matter concentration at the control device exhaust is 50 ppmv or less, regardless of inlet concentration.
 - (vii) Each performance test shall consist of three separate runs; each run conducted for at least one hour under the conditions that exist when the affected source is operating under normal operating conditions. For the purpose of determining organic volatile matter concentrations and mass flow rates, the average of results of all runs shall apply.
 - (viii) Organic volatile matter mass flow rates shall be determined using Equation 20 in 40 CFR 63.828 (Subpart KK). A copy of Subpart KK is included with this permit.
 - (ix) Emission control device efficiency shall be determined using Equation 21 in 40 CFR 63.828 (Subpart KK).
 - (x) The Permittee shall record such process information as may be necessary to determine the conditions of the performance test. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.
 - (xi) For the purpose of determining the value of the oxidizer operating parameter that will demonstrate continuing compliance, the time-weighted average of the values recorded during the performance test shall be computed. The Permittee shall establish as the operating parameter the minimum combustion temperature.
- (2) A performance test to determine the capture efficiency (F) of the capture system venting organic emissions to the thermal oxidizer TO-2 shall be conducted in accordance with the following:

- (i) For a permanent total enclosure, capture efficiency shall be assumed as 100 percent. Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure as found in appendix B to 40 CFR 52.741 shall be used to confirm that an enclosure meets the requirements for permanent total enclosure.
 - (ii) For other than a permanent total enclosure, the capture efficiency shall be determined according to the protocol specified in 40 CFR 52.741(a)(4)(iii)(B).
 - (iii) As an alternative, the Permittee may use any capture efficiency protocol and test methods that satisfy the criteria of either the Data Quality Objective (DQO) or the Lower Confidence Limit (LCL) approach as described in Appendix A of 40 CFR Part 63, Subpart KK, the Printing and Publishing Industry NESHA.
- (3) Calculate the overall organic HAP control efficiency, (R), achieved using the following equation:
$$R = E \cdot F / 100$$
- (4) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameters established in accordance with the procedures in Condition D.2.10 whenever the coating line S-4 is operating.
- (5) The affected source is in compliance if the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with Condition D.2.10(a) for each three-hour period, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with Condition D.2.10(b) for each three hour period, and the overall organic HAP control efficiency, R, is 95 percent or greater.
- (b) As an alternative to the procedures in paragraph (a) of this condition, the Permittee may use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site-specific operating parameter to assure capture efficiency. Compliance shall be demonstrated by following the procedures listed below:
 - (1) Install continuous emission monitors to determine the total organic volatile matter mass flow rate (e.g., by determining the concentration of the vent gas in grams per cubic meter, and the volumetric flow rate in cubic meters per second, such that the total organic volatile matter mass flow rate in grams per second can be calculated and summed) at both the inlet to and the outlet from the control device, such that the percent control efficiency (E) of the control device can be calculated for each month.
 - (2) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameter established in accordance with the procedures in Condition D.2.10(b) whenever the S-4 coating line is operated.
 - (3) Determine the capture efficiency (F) in accordance with the procedures in paragraph (a)(2) of this condition.

- (4) Calculate the overall organic HAP control efficiency, (R), achieved for each month using the equation in paragraph (a)(3) of this condition.
- (5) The affected source is in compliance if the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with for each three hour period, and the overall organic HAP control efficiency, R, is 95 percent or greater.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.9 Volatile Organic Compound Control

When operating, the thermal oxidizer shall maintain a minimum operating temperature of 1300°F or a temperature determined in the most recent compliance stack tests to maintain at least 95.0% overall control efficiency. The temperature of the burner of the thermal oxidizer shall be continuously monitored and recorded whenever any of the facilities are in operation. Compliance with this condition shall deem 326 IAC 8-2-5 satisfied.

D.2.10 New Source Toxics Control [326 IAC 2-4.1-1]

Following the date on which the initial performance test of the thermal oxidizer TO-2 is completed, to demonstrate continuing compliance with Condition D.2.3(a), the Permittee shall monitor and inspect the oxidizer to ensure proper operation and maintenance by implementing the following:

- (a) Install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of +/-1 percent of the temperature being monitored in degrees Celsius or +/-1 degrees Celsius, whichever is greater. The thermocouple or temperature sensor shall be installed in the combustion chamber at a location in the combustion zone.
- (b) Monitor an operating parameter to ensure that the capture efficiency measured during the initial compliance test is maintained. The Permittee shall:
 - (1) Submit to IDEM, OAM a plan that:
 - (i) Identifies the operating parameter to be monitored to ensure that the capture efficiency measured during the initial compliance test is maintained;
 - (ii) Discusses why this parameter is appropriate for demonstrating ongoing compliance; and
 - (iii) Identifies the specific monitoring procedures;
 - (2) Set the operating parameter value, or range of values, that demonstrate compliance with Condition D.2.3(a), and
 - (3) Conduct monitoring in accordance with the plan submitted to IDEM, OAM unless comments received from IDEM, OAM require an alternate monitoring scheme.
- (c) Any excursion from the required operating parameters which are monitored in accordance with paragraphs (a) and (b) of this condition, unless otherwise excused, shall be considered a violation of the emission standard in Condition D.2.3(a).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.11 Record Keeping Requirements

- (a) The Permittee shall maintain records of the materials used that contain any VOCs or HAPs. The records shall be complete and sufficient to establish compliance with the VOC and HAP usage limits and/or the VOC and HAP emission limits established in conditions D.2.1, D.2.2, and D.2.3. The records shall contain, as a minimum, the following information:
 - (1) The weight of VOC-containing and HAP-containing material used, including purchase orders and invoices necessary to verify the type and amount used.
 - (2) The VOC and HAP content (weight and volume percent) of each material used.
 - (3) The weight of VOCs and HAPs emitted for each compliance period, considering capture and destruction (or removal) efficiency.
 - (4) VOC and HAP control device and capture system operating parameter data for each month, such as:
 - (i) Capture efficiency;
 - (ii) Destruction (or removal) efficiency;
 - (iii) Data used to establish the capture and destruction (or removal) efficiencies; and
 - (iv) Temperature readings.

D.2.12 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Colwell/General, Inc.
Source Address: 231 South Progress Drive East, Kendallville, Indiana 46755-3269
Mailing Address: P.O. Box 218, Kendallville, Indiana 46755-0218
Part 70 Permit No.: T113-6020-00019
Facility: rollcoating paper application system CC-1
Parameter: VOC
Limit: The usage of VOC, including coatings, dilution solvents, and cleaning solvents, in the rollcoating paper coating application system, identified as CC-1, shall be limited to 81.96 tons per twelve (12) consecutive month period, rolled on a monthly basis. VOC emissions from the rollcoating paper coating application system shall be controlled by the thermal oxidizer, identified as TO-1, that maintains a minimum overall control efficiency of 94.0%.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	VOC Usage This Month (tons)	VOC Usage Previous 11 Months (tons)	12 Month Total VOC Usage (tons)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Colwell/General, Inc.
Source Address: 231 South Progress Drive East, Kendallville, Indiana 46755-3269
Mailing Address: P.O. Box 218, Kendallville, Indiana 46755-0218
Part 70 Permit No.: T113-6020-00019
Facility: rollcoating paper application system CC-1
Parameter: Single HAP and Total HAP
Limit: The total input of any single HAP and any combination of HAPs, including coatings, dilution solvents, and cleaning solvents, to the rollcoating paper coating application system, CC-1, shall be limited to 165 and 400 tons per twelve (12) consecutive month period, rolled on a monthly basis, respectively. HAP emissions from the rollcoating paper coating application system shall be controlled by the thermal oxidizer, TO-1, that maintains a minimum overall control efficiency of 94.0%.

YEAR: _____

Month	Worst-Case Single HAP Usage This Month (tons)	Total HAP Usage This Month (tons)	Worst-Case Single HAP Usage Previous 11 Months (tons)	Total HAP Usage Previous 11 Months (tons)	12 Month Worst-Case Single HAP Usage (tons)	12 Month Total HAP Usage (tons)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Colwell/General, Inc.
Source Address: 231 South Progress Drive East, Kendallville, Indiana 46755-3269
Mailing Address: P.O. Box 218, Kendallville, Indiana 46755-0218
Part 70 Permit No.: T113-6020-00019
Facility: rollcoating paper application system S-4
Parameter: VOC
Limit: The usage of VOC, including coatings, dilution solvents, and cleaning solvents, in the rollcoating paper coating application system, identified as S-4, shall be limited to 681.62 tons per twelve (12) consecutive month period, rolled on a monthly basis. VOC emissions from the rollcoating paper coating application system shall be controlled by the thermal oxidizer, identified as TO-2, that maintains a minimum overall control efficiency of 95.0%.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	VOC Usage This Month (tons)	VOC Usage Previous 11 Months (tons)	12 Month Total VOC Usage (tons)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Part 70 Significant Source Modification.

Source Background and Description

Source Name:	Colwell/General, Inc.
Source Location:	231 South Progress Drive East Kendallville, Indiana 46755
County:	Noble
SIC Code:	2752
Operation Permit No.:	T 113-6020-00019
Operation Permit Issuance Date:	October 6, 1998
Source Modification No.:	113-11120-00019
Permit Reviewer:	Trish Earls/EVP

The Office of Air Management (OAM) has reviewed a modification application from Colwell/General, Inc. relating to the construction of the following emission units and pollution control devices:

- (a) one (1) curing oven and rollcoating paper coating application system, identified as CC-1, equipped with one (1) 1.35 million (MM) British thermal units (Btu) per hour, natural gas-fired burner for the curing oven, with a maximum throughput of 36 pounds of coating per hour to coat a maximum of 41.8 pounds of paper per hour, with VOC emissions controlled by an existing thermal oxidizer, identified as TO-1, exhausting through one (1) stack, identified as #S1;
- (b) one (1) curing oven and rollcoating paper coating application system, identified as S-4, with a maximum throughput of 425 pounds of coating per hour to coat a maximum of 1,079 pounds of paper per hour, with VOC emissions controlled by a new thermal oxidizer, identified as TO-2, exhausting through one (1) stack, identified as #TO-2; and
- (c) one (1) thermal oxidizer, identified as TO-2, using natural gas as a supplementary fuel at a maximum heat input rate of 3.0 million (MM) British thermal units (Btu) per hour, exhausting through one (1) stack, identified as #TO-2. The curing oven on the S-4 coating line is powered through heat recovery from this thermal oxidizer.

History

On May 20, 1999 and July 2, 1999, Colwell/General, Inc. submitted two (2) separate applications to the OAM requesting to add two (2) additional coating lines each consisting of a roll coater and curing oven, and a new thermal oxidizer to their existing plant. Colwell/General, Inc. was issued a Part 70 permit on October 6, 1998.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S1 (existing)	CC-1 Line	25	3.25	36,557	790
TO-2 (new)	S-4 Line	30	2.08	11,768	620

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

Two (2) applications for the purposes of this review were received on May 20, 1999 and July 2, 1999.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (5 pages).

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	0.04
PM-10	0.14
SO ₂	0.01
VOC	1,253.92
CO	1.60
NO _x	1.91

HAP's	Potential To Emit (tons/year)
Ethylbenzene	greater than 10
Xylene	greater than 10
Toluene	greater than 10
MEK	greater than 10
DEHP	greater than 10
TOTAL	greater than 25

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(g).

County Attainment Status

The source is located in Noble County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Noble County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Noble County has been classified as attainment or unclassifiable for all other regulated pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	0.0
PM-10	0.0
SO ₂	0.0
VOC	283.6
CO	0.0
NO _x	0.0

- (a) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.

- (b) These emissions are based upon the Technical Support Document for Part 70 Operating Permit No. T113-6020-00019, issued on October 6, 1998.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)							
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	Single HAP	Total HAPs
Proposed Modification	0.04	0.14	0.01	39.10	1.60	1.91	17.38	36.48
PSD Significant Level	25	15	40	40	100	40	N/A	N/A

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

State Rule Applicability - Individual Facilities

326 IAC 2-2 (Prevention of Significant Deterioration)

Pursuant to the Part 70 permit (T113-6020-00019), issued on October 6, 1998, this existing source is a major PSD source. However, this source will limit VOC usage in each of coating lines CC-1 and S-4 to 81.96 and 681.62 tons per twelve (12) consecutive month period, rolled on a monthly basis, respectively. Also, VOC emissions from the coating line CC-1 shall be controlled by the existing thermal oxidizer, identified as TO-1, which shall maintain a minimum overall control efficiency of 94.0%. The VOC emissions from the coating line S-4 shall be controlled by the new thermal oxidizer, identified as TO-2, which shall maintain a minimum overall control efficiency of 95.0%. These usage limits and control device requirements will limit VOC emissions to less than 40 tons per year so that this modification to an existing major source is minor and the requirements of 326 IAC 2-2 do not apply.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it is located in Noble County and has the potential to emit more than one hundred (100) tons per year of VOC. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 2-4.1-1 (New Source Toxics Control)

Pursuant to 326 IAC 2-4.1-1 (New Source Toxics Control), any new process or production unit which in and of itself emits or has the potential to emit (PTE) 10 tons per year of any HAP or 25 tons per year of the combination of HAPs, and is constructed or reconstructed after July 27, 1997, must be controlled using technologies consistent with Maximum Achievable Control Technology (MACT).

- (a) This source will limit single and total HAP usage in the new coating line, CC-1, to 165 and 400 tons per twelve (12) consecutive month period, rolled on a monthly basis, respectively. Also, the existing thermal oxidizer (TO-1) shall be in operation at all times that the coating line CC-1 is in operation and shall maintain a minimum overall control efficiency of 94.0%. This limit will limit single and total HAP emissions to less than 10 and 25 tons per year, respectively, in coating line CC-1 so that 326 IAC 2-4.1-1 does not apply.
- (b) Since single and total HAP emissions in coating line S-4 cannot be limited to less than 10 and 25 tons per year, respectively, this coating line is subject to the requirements of this rule. Pursuant to this rule, HAP emissions must be controlled using MACT. The MACT standard for the Paper and Other Web Coating source category is scheduled for promulgation in 2000. Currently for this source category, a presumptive MACT (PMACT) determination has been made by the EPA with stakeholder input from Federal, State, and local environmental agencies and industry representatives based on readily available industry data. This PMACT applies to those facilities in which a coating is applied to a web substrate and is subsequently air dried, cured in an oven, or cured by radiation. Since the coating line S-4 applies coating to a web substrate, in this case paper, which is subsequently cured in an oven, the PMACT requirements will apply. A complete discussion on how the PMACT determination was made for the paper and other web coating source category can be found in the EPA document entitled "Presumptive Maximum Achievable Control Technology for the Paper and Other Web Coating Source Category", EPA, Office of Air Quality Planning and Standards, (OAQPS), Emission Standards Division, Coatings and Consumer Products Group, May 1997.

Based on the currently available data and comments from the stakeholders involved, presumptive MACT for HAP emissions from Paper and Other Web Coating, which shall apply to coating line S-4, is any one or combination of the following:

- (1) At least 95-99 percent overall control efficiency (capture and control) using an add-on control device for emissions from a coating line, as calculated over a calendar month; or
- (2) no more than 0.20 kg HAP applied per kg coating solids applied, as calculated on a weighted average basis for each calendar month for all coatings used; or

- (3) no more than 0.20 kg HAP emitted per kg coating solids applied, as calculated on a weighted average for all coatings used each calendar month.

An overall control efficiency range of 95-99 percent was provided because, although it has been acknowledged that current technology has resulted in overall emission reductions as high as 99 percent, the extent of this level of control efficiency within the industry is currently unknown. It is intended that presenting overall control efficiency levels as a range will allow for the use of traditional as well as innovative control technologies. Various technology options are thereby allowed, including, but not limited to, thermal and catalytic oxidizers, carbon adsorbers, solvent recovery systems, bioreactors, etc. It is also assumed that 100 percent capture efficiency is achievable and reasonable, since a number of facilities currently are known to achieve 100 percent capture using permanent total enclosures (PTE). The regulatory subgroup, consisting of the EPA project team and EPA Regional and State/Local Agency representatives, believes that PTE can readily be installed on new coating lines that are subject to case-by-case MACT under Section 112(g).

This source will use a thermal oxidizer, identified as TO-2, with a minimum overall control efficiency of 95% as PMACT to comply with this rule. A permanent total enclosure (PTE) shall also be installed to achieve 100 percent capture.

Compliance options for emission limitation (1) listed above can be established using the Printing and Publishing NESHAP, 40 CFR Part 63, Subpart KK as a guide.

Pursuant to 40 CFR 63, Subpart KK, each owner or operator using an oxidizer to control emissions shall show compliance by following the procedures in either paragraph (d)(1) or (d)(2) of 40 CFR 63.825. Since this source will demonstrate compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters per 40 CFR 63.825(d)(1), the source shall follow the procedures listed below:

- (1) Determine the oxidizer destruction efficiency (E) using the procedure in 40 CFR 63.827(d).
- (2) Determine the capture system capture efficiency (F) in accordance with 40 CFR 63.827(e)-(f). Note that since the source must install a PTE, capture efficiency shall be assumed as 100 percent. Procedure T-Criteria for and Verification of a Permanent or Temporary Total Enclosure as found in appendix B to 40 CFR 52.741 of part 52 of this chapter shall be used to confirm that an enclosure meets the requirements for permanent total enclosure.
- (3) Calculate the overall organic HAP control efficiency, (R), achieved using the following equation:

$$R = EF/100$$

where: E = VOC destruction efficiency
F = VOC capture efficiency

- (4) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameters established in accordance with 40 CFR 63.828(a)(4)-(5).

- (5) The affected source is in compliance, if the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with 40 CFR 63.828(a)(4) for each three-hour period, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with 40 CFR 63.828(a)(5) for each three hour period, and the overall organic HAP control efficiency, R, is 95 percent or greater.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)

This modification is not subject to the requirements of this rule because, although the two (2) coating lines are new facilities, they are subject to the requirements of 326 IAC 8-2-5 (Paper Coating Operations). Therefore, the requirements of 326 IAC 8-1-6 do not apply.

326 IAC 8-2-5 (Paper Coating Operations)

Pursuant to 326 IAC 8-2-5 (Paper Coating Operations), the volatile organic compound (VOC) content of coatings applied in each of paper coating lines CC-1 and S-4 to labels of any substrate, or pressure sensitive tapes, or paper, plastic or metal foil by means of web coating shall be limited to 2.9 pounds VOC per gallon of coating less water delivered to the applicator. The source shall comply with this rule, pursuant to 326 IAC 8-1-2(c), by using the existing thermal oxidizer (TO-1) and the new thermal oxidizer (TO-2) at all times that the paper coating lines CC-1 and S-4, respectively, are in operation. Also, the existing thermal oxidizer (TO-1) and shall maintain a minimum overall control efficiency of 94.0% and the new thermal oxidizer (TO-2) shall maintain a minimum overall control efficiency of 95.0%. See Appendix A, page 3 of 5, for detailed compliance calculations.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

1. The coating line CC-1 has applicable compliance monitoring conditions as specified below:
 - (a) The temperature of the catalytic thermal oxidizer (TO-1) controlling emissions from paper coating line CC-1 must be monitored and recorded continuously. When operating, the thermal oxidizer must maintain a minimum operating temperature of 1400°F or a temperature, fan amperage, and duct velocity determined in the most recent compliance stack tests to maintain at least a 94.0% overall control efficiency.

- (b) For each coating, the gallons applied, density, and percent VOC content by weight and volume, must be monitored and recorded daily.

These monitoring conditions are necessary because the thermal oxidizer for the paper coating line must operate properly to ensure compliance with 326 IAC 8-2-5 (Paper Coating Operations) and 326 IAC 2-7 (Part 70) and to avoid the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1-1 (New Source Toxics Control).

- 2. The coating line S-4 has applicable compliance monitoring conditions as specified below:

- (a) Since the source is using a thermal oxidizer and a permanent total enclosure (PTE) to comply with the PMACT requirements for coating line S-4, the following monitoring requirements shall apply pursuant to 40 CFR 63.828(a)(4) and (5):

- (1) An owner or operator complying with the requirements through the use of an oxidizer and demonstrating continuous compliance through monitoring of an oxidizer operating parameter shall:

- (i) For an oxidizer other than a catalytic oxidizer, install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of +1 percent of the temperature being monitored in °C or +1 °C, whichever is greater. The thermocouple or temperature sensor shall be installed in the combustion chamber at a location in the combustion zone.

- (2) An owner or operator complying with the requirements through the use of a control device and demonstrating continuous compliance by monitoring an operating parameter to ensure that the capture efficiency measured during the initial compliance test is maintained, shall:

- (i) Submit to the Administrator a plan that:
 - (A) Identifies the operating parameter to be monitored to ensure that the capture efficiency measured during the initial compliance test is maintained,
 - (B) Discusses why this parameter is appropriate for demonstrating ongoing compliance, and
 - (C) Identifies the specific monitoring procedures;
 - (ii) Set the operating parameter value, or range of values, that demonstrate compliance with PMACT, and
 - (iii) Conduct monitoring in accordance with the plan submitted to the Administrator unless comments received from the Administrator require an alternate monitoring scheme.

- (b) When operating, the thermal oxidizer must maintain a minimum operating temperature of 1300°F or a temperature determined in the most recent compliance stack test to maintain at least a 95.0% overall control efficiency.

- (c) For each coating, the gallons applied, density, and percent VOC content by weight and volume, must be monitored and recorded daily.

These monitoring conditions are necessary because the thermal oxidizer for the paper coating line S-4 must operate properly to ensure compliance with 326 IAC 8-2-5 (Paper Coating Operations), 326 IAC 2-7 (Part 70), and 326 IAC 2-4.1-1 (New Source Toxics Control), and to avoid the requirements of 326 IAC 2-2 (PSD).

Note: A quarterly report form was included in the original Part 70 Permit to report coating usages in each line and the weight percent VOC in those coatings. This form has been removed from the Part 70 Permit by this Significant Source Modification because it has been determined that record keeping of the information listed above is sufficient to demonstrate compliance with 326 IAC 8-2-5 for each coating line at the source.

Changes Proposed

The following changes (additions in bold, deletions in strikeout) have been made to the Part 70 Operating Permit (T113-6020-00019):

1. Section A is revised to read as shown below. Note that the PSD source status was incorrectly listed as minor in the original Part 70 permit but has been corrected here.

SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a **stationary** paper coating and offset printing presses **operation** producing paint chips and stripe cards.

Responsible Official: David Brayton
Source Address: 231 South Progress Drive East, Kendallville, Indiana 46755-3269
Mailing Address: P.O. Box 218, Kendallville, Indiana 46755-0218
Phone Number: 219-347-1981
SIC Code: 2752
County Location: Noble
County Status: Attainment for all criteria pollutants
Source Status: Part 70 Permit Program
~~Minor~~ **Major** Source, under PSD Rules;
Major Source, ~~Part 70 Permit Program~~ **Section 112 of the Clean Air Act**

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (1) one (1) paper coating line, S-1, with a maximum throughput of 35 gallons of coatings per hour. Emissions shall be controlled by direct flame incinerator, TO-1, (capacity details listed under insignificant activity (1)), then exhausted at Stack/Vent ID #S1;
- (2) one (1) paper coating line, S-3, with a maximum throughput of 35 gallons of coatings per hour. Emissions shall be controlled by a thermal oxidizer, TO-1, then exhausted at Stack/Vent ID #S1;

- (3) one (1) paper coating line, S-2, with a maximum throughput of 432 pounds of coating per hour. Emissions shall be controlled by a thermal oxidizer, TO-1, then exhausted at Stack/Vent ID #S1; ~~and~~
- (4) one (1) enclosed can washer with recirculating solvent, with suspended VOC exhausted to and controlled by a thermal oxidizer, TO-1, then exhausted at Stack/Vent ID #S1;
- (5) **one (1) curing oven and rollcoating paper coating application system, identified as CC-1, equipped with one (1) 1.35 million (MM) British thermal units (Btu) per hour, natural gas-fired burner for the curing oven, with a maximum throughput of 36 pounds of coating per hour to coat a maximum of 41.8 pounds of paper per hour, with VOC emissions controlled by an existing thermal oxidizer, identified as TO-1, exhausting through one (1) stack, identified as #S1;**
- (6) **one (1) curing oven and rollcoating paper coating application system, identified as S-4, with a maximum throughput of 425 pounds of coating per hour to coat a maximum of 1,079 pounds of paper per hour, with VOC emissions controlled by a new thermal oxidizer, identified as TO-2, exhausting through one (1) stack, identified as #TO-2; and**
- (7) **one (1) thermal oxidizer, identified as TO-2, using natural gas as a supplementary fuel at a maximum heat input rate of 3.0 million (MM) British thermal units (Btu) per hour, exhausting through one (1) stack, identified as #TO-2. The curing oven on the S-4 coating line is powered through heat recovery from this thermal oxidizer.**

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]
[326 IAC 2-7-5(15)]

This stationary source does not currently have any insignificant activities, as defined in 326 IAC 2-7-1 (21) that have applicable requirements.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) **It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).**

2. Section D.1 is revised to read as follows:

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (1) one (1) paper coating line, S-1, with a maximum throughput of 35 gallons of coatings per hour. Emissions shall be controlled by direct flame incinerator, TO-1, (capacity details listed under insignificant activity (1)), then exhausted at Stack/Vent ID #S1;
- (2) one (1) paper coating line, S-3, with a maximum throughput of 35 gallons of coatings per hour. Emissions shall be controlled by a thermal oxidizer, TO-1, then exhausted at Stack/Vent ID #S1;
- (3) one (1) paper coating line, S-2, with a maximum throughput of 432 pounds of coating per hour. Emissions shall be controlled by a thermal oxidizer, TO-1, then exhausted at Stack/Vent ID #S1; ~~and~~
- (4) one (1) enclosed can washer with recirculating solvent, with suspended VOC exhausted to and controlled by a thermal oxidizer, TO-1, then exhausted at Stack/Vent ID #S1; **and**
- (5) **one (1) curing oven and rollcoating paper coating application system, identified as CC-1, equipped with one (1) 1.35 million (MM) British thermal units (Btu) per hour, natural gas-fired burner for the curing oven, with a maximum throughput of 36 pounds of coating per hour to coat a maximum of 41.8 pounds of paper per hour, with VOC emissions controlled by an existing thermal oxidizer, identified as TO-1, exhausting through one (1) stack, identified as #S1.**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-5]

- (a) Pursuant to 326 IAC 8-2-5 (Paper Coating Operations), no owner or operator of a coating line subject to this section may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of two and nine-tenths (2.9) pounds per gallon excluding water, delivered to the coating applicator from a paper, plastic, metal foil, or pressure sensitive tape/labels coating line.
- (b) When operating the thermal oxidizer (TO-1) to achieve the limit for rule 326 IAC 8-2-5, 2.9 pounds of VOC emitted to the atmosphere per gallon of coating less water delivered to the applicator, the thermal oxidizer shall maintain a minimum ~~90.3~~ **94.0**% overall efficiency. This efficiency is required by the rule 326 IAC 8-1-2 (a)(2). Based upon 326 IAC 8-1-2 (c) and the overall control efficiency of ~~90.3~~ **94.0**%, the VOC content of the coating shall not exceed 18.1 pounds per gallon of coating solids delivered to the applicator.

D.1.2 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The usage of VOC, including coatings, dilution solvents, and cleaning solvents, in the rollcoating paper coating application system, identified as CC-1, shall be limited to 81.96 tons per twelve (12) consecutive month period, rolled on a monthly basis. VOC emissions from the rollcoating paper coating application system shall be controlled by the thermal oxidizer, identified as TO-1, that maintains a minimum overall control efficiency of 94.0%. This limit will render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.1.3 Hazardous Air Pollutants (HAPs) [326 IAC 2-4.1-1]

The total input of any single HAP and any combination of HAPs, including coatings, dilution solvents, and cleaning solvents, to the rollcoating paper coating application system, CC-1, shall be limited to 165 and 400 tons per twelve (12) consecutive month period, rolled on a monthly basis, respectively. HAP emissions from the rollcoating paper coating application system shall be controlled by the thermal oxidizer, TO-1, that maintains a minimum overall control efficiency of 94.0%. These limits shall render the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control) not applicable.

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

Compliance Determination Requirements

D.1.25 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

~~During the period between 0 and 6 months after issuance of this permit, The Permittee shall perform VOC testing on the 9.4 MM Btu/hr thermal oxidizer, TO-1, by a method approved by the Commissioner, to determine the minimum operating temperature that will achieve 90-3 94.0% overall efficiency for this incinerator. This test shall be repeated at least once every~~ **Since the initial test required by this permit was performed within 6 months after issuance of this permit, this test shall not be required until five (5) years from the date of this valid compliance demonstration.** In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.1.36 Volatile Organic Compounds (VOC)

Compliance with the VOC content contained in Condition D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3)(A) and 326 IAC 8-1-2(a)(7) using formulation data supplied by the coating manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.7 Volatile Organic Compounds (VOC)

The thermal oxidizer, TO-1, shall be in operation at all times when any of the paper coating lines (S-1, S-2, S-3, or CC-1) or the can washing line is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.48 Volatile Organic Compound Control

~~The thermal oxidizer, TO-1, shall be in operation at all times when any of the paper coating lines or the can washing line is in operation.~~ When operating, the thermal oxidizer shall maintain a minimum operating temperature of 1400°F or a temperature, fan amperage, and duct velocity determined in the most recent compliance stack tests to maintain at least ~~90-3~~ **94.0%** overall control efficiency. The temperature of the burner of the thermal oxidizer shall be continuously monitored and recorded whenever any of the facilities are in operation. Compliance with this condition shall deem 326 IAC 8-2-5 satisfied.

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)] [326 IAC 1-6-3]

~~A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.~~

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.9 Record Keeping Requirements

- (a)** The Permittee shall maintain records of the materials used that contain any VOCs. The records shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in ~~this section~~ **condition D.1.1**. The records shall contain, as a minimum, the following information:
- ~~(a)~~**(1)** The weight of VOC-containing material used, including purchase orders and invoices necessary to verify the type and amount used.
 - ~~(b)~~**(2)** The VOC content (weight and volume percent) of each material used.
 - ~~(c)~~**(3)** The weight of VOCs emitted for each compliance period, considering capture and destruction (or removal) efficiency.
 - ~~(d)~~**(4)** Operational parameters of the VOC emission control equipment, considering capture and destruction (or removal) efficiency.
 - ~~(e)~~**(5)** Operational parameters of the VOC emission control equipment, such as:
 - ~~(1)~~**(i)** Capture efficiency;
 - ~~(2)~~**(ii)** Destruction (or removal) efficiency;
 - ~~(3)~~**(iii)** Data used to establish the capture and destruction (or removal) efficiencies; and
 - ~~(4)~~**(iv)** Temperature readings.
- (b)** To document compliance with Conditions D.1.2 and D.1.3, the Permittee shall also maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP usage limits and/or the VOC and HAP emission limits for the CC-1 coating line established in Conditions D.1.2 and D.1.3.
- (1)** The amount, the VOC content, and the HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (2)** A log of the dates of use;
 - (3)** The volume weighted VOC and HAP content of the coatings used for each month;
 - (4)** The cleanup solvent usage for each month;
 - (5)** The total VOC and HAP usage for each month; and
 - (6)** The weight of VOCs and HAPs emitted for each compliance period.

D.1.710 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions ~~D.1.1~~ **D.1.2 and D.1.3** shall be submitted to the address listed in Section C - General Reporting Requirements, **of this permit**, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

3. A new section D.2 has been added to the Part 70 permit for coating line S-4 and the new thermal oxidizer (TO-2). The new section D.2 now reads as follows:

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (6) one (1) curing oven and rollcoating paper coating application system, identified as S-4, with a maximum throughput of 425 pounds of coating per hour to coat a maximum of 1,079 pounds of paper per hour, with VOC emissions controlled by a new thermal oxidizer, identified as TO-2, exhausting through one (1) stack, identified as #TO-2; and
- (7) one (1) thermal oxidizer, identified as TO-2, using natural gas as a supplementary fuel at a maximum heat input rate of 3.0 million (MM) British thermal units (Btu) per hour, exhausting through one (1) stack, identified as #TO-2. The curing oven on the S-4 coating line is powered through heat recovery from this thermal oxidizer.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-5]

- (a) Pursuant to 326 IAC 8-2-5 (Paper Coating Operations), no owner or operator of a coating line subject to this section may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of two and nine-tenths (2.9) pounds per gallon excluding water, delivered to the coating applicator from a paper, plastic, metal foil, or pressure sensitive tape/labels coating line.
- (b) When operating the thermal oxidizer (TO-2) to achieve the limit for rule 326 IAC 8-2-5, 2.9 pounds of VOC emitted to the atmosphere per gallon of coating less water delivered to the applicator, the thermal oxidizer shall maintain a minimum 95.0% overall efficiency. This efficiency exceeds the minimum overall control efficiency required by the rule 326 IAC 8-1-2 (a)(2).

D.2.2 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The usage of VOC, including coatings, dilution solvents, and cleaning solvents, in the rollcoating paper coating application system, identified as S-4, shall be limited to 681.62 tons per twelve (12) consecutive month period, rolled on a monthly basis. VOC emissions from the rollcoating paper coating application system shall be controlled by the thermal oxidizer, identified as TO-2, that maintains a minimum overall control efficiency of 95.0%. This limit will render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.2.3 New Source Toxics Control [326 IAC 2-4.1-1]

Pursuant to the MACT determination under 326 IAC 2-4.1-1, operating conditions for the new rollcoating paper coating application system, identified as S-4, shall be any one or combination of the following:

- (a) At least 95-99 percent overall control efficiency (capture and control) using an add-on control device for emissions from a coating line, as calculated over a calendar month; or
- (b) no more than 0.20 kg HAP applied per kg coating solids applied, as calculated on a weighted average basis for each calendar month for all coatings used; or
- (c) no more than 0.20 kg HAP emitted per kg coating solids applied, as calculated on a weighted average for all coatings used each calendar month.

This source will use the thermal oxidizer, identified as TO-2, with a minimum overall control efficiency of 95% as PMACT to comply with this rule. A permanent total enclosure (PTE) shall also be installed to achieve 100 percent capture.

D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

Compliance Determination Requirements

D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

During the period between 0 and 6 months after issuance of Significant Source Modification No. 113-11120-00019, the Permittee shall perform VOC testing on the thermal oxidizer, TO-2, by a method approved by the Commissioner, to determine the minimum operating temperature that will achieve 95.0% overall efficiency for this oxidizer. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.2.6 Volatile Organic Compounds (VOC)

Compliance with the VOC content contained in Condition D.2.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.2.7 Volatile Organic Compounds (VOC)

The thermal oxidizer, TO-2, shall be in operation at all times when the paper coating line (S-4) is in operation.

D.2.8 New Source Toxics Control [326 IAC 2-4.1-1]

Compliance options for the emission limitation in condition D.2.3 listed above can be established using the Printing and Publishing NESHAP, 40 CFR Part 63, Subpart KK as a guide.

Pursuant to 40 CFR 63, Subpart KK, each owner or operator using an oxidizer to control emissions shall show compliance by following the procedures in either paragraph (d)(1) or (d)(2) of 40 CFR 63.825. Since this source will demonstrate compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters per 40 CFR 63.825(d)(1), the source shall follow the procedures listed below:

- (a) Determine the oxidizer destruction efficiency (E) using the procedure in 40 CFR 63.827(d).

- (b) Determine the capture system capture efficiency (F) in accordance with 40 CFR 63.827(e)-(f). Note that since the source must install a PTE, capture efficiency shall be assumed as 100 percent. Procedure T-Criteria for and Verification of a Permanent or Temporary Total Enclosure as found in appendix B to 40 CFR 52.741 of part 52 of this chapter shall be used to confirm that an enclosure meets the requirements for permanent total enclosure.
- (c) Calculate the overall organic HAP control efficiency, (R), achieved using the following equation:

$$R = EF/100$$

where: E = VOC destruction efficiency
F = VOC capture efficiency

- (d) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameters established in accordance with 40 CFR 63.828(a)(4)-(5).
- (e) The affected source is in compliance, if the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with 40 CFR 63.828(a)(4) for each three-hour period, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with 40 CFR 63.828(a)(5) for each three hour period, and the overall organic HAP control efficiency, R, is 95 percent or greater.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.9 Volatile Organic Compound Control

- (a) When operating, the thermal oxidizer shall maintain a minimum operating temperature of 1300°F or a temperature determined in the most recent compliance stack tests to maintain at least 95.0% overall control efficiency. The temperature of the burner of the thermal oxidizer shall be continuously monitored and recorded whenever any of the facilities are in operation. Compliance with this condition shall deem 326 IAC 8-2-5 satisfied.
- (b) Since the source is using a thermal oxidizer and PTE to comply with the PMACT requirements for coating line S-4, the following monitoring requirements shall apply pursuant to 40 CFR 63.828(a)(4) and (5):
 - (1) An owner or operator complying with the requirements through the use of an oxidizer and demonstrating continuous compliance through monitoring of an oxidizer operating parameter shall:
 - (i) For an oxidizer other than a catalytic oxidizer, install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of +/- 1 percent of the temperature being monitored in °C or +1 °C, whichever is greater. The thermocouple or temperature sensor shall be installed in the combustion chamber at a location in the combustion zone.
 - (2) An owner or operator complying with the requirements through the use of a control device and demonstrating continuous compliance by monitoring an operating parameter to ensure that the capture efficiency measured during the initial compliance test is maintained, shall:

- (i) **Submit to the Administrator a plan that:**
 - (A) **Identifies the operating parameter to be monitored to ensure that the capture efficiency measured during the initial compliance test is maintained,**
 - (B) **Discusses why this parameter is appropriate for demonstrating ongoing compliance, and**
 - (C) **Identifies the specific monitoring procedures;**
- (ii) **Set the operating parameter value, or range of values, that demonstrate compliance with PMACT, and**
- (iii) **Conduct monitoring in accordance with the plan submitted to the Administrator unless comments received from the Administrator require an alternate monitoring scheme.**

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.10 Record Keeping Requirements

- (a) **The Permittee shall maintain records of the materials used that contain any VOCs. The records shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in conditions D.2.1 and D.2.2. The records shall contain, as a minimum, the following information:**
 - (1) **The weight of VOC-containing material used, including purchase orders and invoices necessary to verify the type and amount used.**
 - (2) **The VOC content (weight and volume percent) of each material used.**
 - (3) **The weight of VOCs emitted for each compliance period, considering capture and destruction (or removal) efficiency.**
 - (4) **VOC control device and capture system operating parameter data for each month, such as:**
 - (i) **Capture efficiency;**
 - (ii) **Destruction (or removal) efficiency;**
 - (iii) **Data used to establish the capture and destruction (or removal) efficiencies; and**
 - (iv) **Temperature readings.**

D.2.11 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

- 4. The report form for the limit pursuant to 326 IAC 8-2-5 included in the original Part 70 permit has been removed through this Significant Source Modification because it was determined that reporting is not necessary to demonstrate compliance with 326 IAC 8-2-5. Two new report forms are now included in the Part 70 permit to document compliance with the VOC and HAP usage limits in conditions D.1.2, D.1.3, and D.2.2. The forms now read as follows:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Colwell/General, Inc.
Source Address: 231 South Progress Drive East, Kendallville, Indiana 46755-3269
Mailing Address: P.O. Box 218, Kendallville, Indiana 46755-0218
Part 70 Permit No.: T113-6020-00019
Facility: rollcoating paper application system CC-1
Parameter: VOC
Limit: The usage of VOC, including coatings, dilution solvents, and cleaning solvents, in the rollcoating paper coating application system, identified as CC-1, shall be limited to 81.96 tons per twelve (12) consecutive month period, rolled on a monthly basis. VOC emissions from the rollcoating paper coating application system shall be controlled by the thermal oxidizer, identified as TO-1, that maintains a minimum overall control efficiency of 94.0%.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	VOC Usage This Month (tons)	VOC Usage Previous 11 Months (tons)	12 Month Total VOC Usage (tons)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Colwell/General, Inc.
Source Address: 231 South Progress Drive East, Kendallville, Indiana 46755-3269
Mailing Address: P.O. Box 218, Kendallville, Indiana 46755-0218
Part 70 Permit No.: T113-6020-00019
Facility: rollcoating paper application system CC-1
Parameter: Single HAP and Total HAP
Limit: The total input of any single HAP and any combination of HAPs, including coatings, dilution solvents, and cleaning solvents, to the rollcoating paper coating application system, CC-1, shall be limited to 165 and 400 tons per twelve (12) consecutive month period, rolled on a monthly basis, respectively. HAP emissions from the rollcoating paper coating application system shall be controlled by the thermal oxidizer, TO-1, that maintains a minimum overall control efficiency of 94.0%.

YEAR: _____

Month	Single HAP Usage This Month (tons)	Total HAP Usage This Month (tons)	Single HAP Usage Previous 11 Months (tons)	Total HAP Usage Previous 11 Months (tons)	12 Month Single HAP Usage (tons)	12 Month Total HAP Usage (tons)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Colwell/General, Inc.
Source Address: 231 South Progress Drive East, Kendallville, Indiana 46755-3269
Mailing Address: P.O. Box 218, Kendallville, Indiana 46755-0218
Part 70 Permit No.: T113-6020-00019
Facility: rollcoating paper application system S-4
Parameter: VOC
Limit: The usage of VOC, including coatings, dilution solvents, and cleaning solvents, in the rollcoating paper coating application system, identified as S-4, shall be limited to 681.62 tons per twelve (12) consecutive month period, rolled on a monthly basis. VOC emissions from the rollcoating paper coating application system shall be controlled by the thermal oxidizer, identified as TO-2, that maintains a minimum overall control efficiency of 95.0%.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	VOC Usage This Month (tons)	VOC Usage Previous 11 Months (tons)	12 Month Total VOC Usage (tons)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 113-11120-00019.

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document for a Part 70 Significant Source Modification

Source Name: Colwell/General, Inc.
Source Location: 231 South Progress Drive East, Kendallville, Indiana 46755
County: Noble
Source Modification No.: 113-11120-00019
SIC Code: 2752
Permit Reviewer: Trish Earls/EVP

On September 23, 1999, the Office of Air Management (OAM) had a notice published in the News-Sun, Kendallville, Indiana, stating that Colwell/General, Inc. had applied for a Significant Source Modification to construct two (2) additional coating lines and a new thermal oxidizer at their existing paint chip and stripe card manufacturing operation. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On November 1, 1999, Colwell/General, Inc. submitted comments on the proposed permit. The summary of the comments and corresponding responses is as follows:

Comment #1

In condition D.2.8, reference is made that the PTE will achieve 100% capture efficiency. This requirement is not achievable unless major, costly changes are made to the facility in question. However, we will be able to obtain best demonstrated collection and capture in accordance with measurements taken during initial compliance and performance guarantee testing. As demonstrated in the past, this testing will substantiate the required overall control efficiency for this facility.

Response #1

The source shall not be required to install a permanent total enclosure (PTE) as long as compliance with the 95% overall organic HAP control efficiency, as required by the MACT determination under 326 IAC 2-4.1-1 (New Source Toxics Control), can be demonstrated using the procedures listed in condition D.2.8. Conditions D.2.3 and D.2.8 have been revised as follows (deletions in ~~strikeout~~, additions in **bold**):

D.2.3 New Source Toxics Control [326 IAC 2-4.1-1]

Pursuant to the MACT determination under 326 IAC 2-4.1-1, operating conditions for the new rollcoating paper coating application system, identified as S-4, shall be any one or combination of the following:

- (a) At least ~~95-99~~ percent overall **organic HAP** control efficiency (capture and control) using an add-on control device for emissions from a coating line, as calculated over a calendar month; or
- (b) no more than 0.20 kg HAP applied per kg coating solids applied, as calculated on a weighted average basis for each calendar month for all coatings used; or

- (c) no more than 0.20 kg HAP emitted per kg coating solids applied, as calculated on a weighted average **basis** for all coatings used each calendar month.

This source will use the thermal oxidizer, identified as TO-2, ~~with a minimum overall control efficiency of 95% as PMACT to comply with this rule. A permanent total enclosure (PTE) shall also be installed to achieve 100 percent capture.~~ **to comply with paragraph (a) of this condition.**

D.2.8 New Source Toxics Control [326 IAC 2-4.1-1]

~~Compliance options for the emission limitation in condition D.2.3 listed above can be established using the Printing and Publishing NESHAP, 40 CFR Part 63, Subpart KK as a guide.~~

~~Pursuant to 40 CFR 63, Subpart KK, each owner or operator using an oxidizer to control emissions shall show compliance by following the procedures in either paragraph (d)(1) or (d)(2) of 40 CFR 63.825. Since this source will demonstrate compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters per 40 CFR 63.825(d)(1), the source shall follow the procedures listed below:~~

- ~~(a) Determine the oxidizer destruction efficiency (E) using the procedure in 40 CFR 63.827(d).~~
- ~~(b) Determine the capture system capture efficiency (F) in accordance with 40 CFR 63.827(e)-(f). Note that since the source must install a PTE, capture efficiency shall be assumed as 100 percent. Procedure T-Criteria for and Verification of a Permanent or Temporary Total Enclosure as found in appendix B to 40 CFR 52.741 of part 52 of this chapter shall be used to confirm that an enclosure meets the requirements for permanent total enclosure.~~
- ~~(c) Calculate the overall organic HAP control efficiency, (R), achieved using the following equation:~~

~~$$R = EF/100$$~~

~~where: E = VOC destruction efficiency
F = VOC capture efficiency~~

- ~~(d) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameters established in accordance with 40 CFR 63.828(a)(4)-(5).~~
- ~~(e) The affected source is in compliance, if the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with 40 CFR 63.828(a)(4) for each three-hour period, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with 40 CFR 63.828(a)(5) for each three-hour period, and the overall organic HAP control efficiency, R, is 95 percent or greater.~~

To demonstrate compliance with the 95% overall organic HAP control efficiency requirement in Condition D.2.3(a), the Permittee shall follow the procedures in either paragraph (a) or (b) of this condition:

- (a) Demonstrate initial compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters by following the procedures listed below:**
- (1) An initial performance test to establish the destruction efficiency (E) and the associated combustion zone temperature for the thermal oxidizer TO-2 shall be conducted and the data reduced in accordance with the following reference methods and procedures:**

 - (i) Method 1 or 1A of 40 CFR part 60, appendix A is used for sample and velocity traverses to determine sampling locations.**
 - (ii) Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A is used to determine gas volumetric flow rate.**
 - (iii) Method 3 of 40 CFR part 60, appendix A is used for gas analysis to determine dry molecular weight.**
 - (iv) Method 4 of 40 CFR part 60, appendix A is used to determine stack gas moisture.**
 - (v) Methods 2, 2A, 3, and 4 of 40 CFR part 60, appendix A shall be performed, as applicable, at least twice during each test period.**
 - (vi) Method 25 of 40 CFR part 60, Appendix A, shall be used to determine organic volatile matter concentration, except as provided in (A) to (C) below. The Permittee shall submit notice of the intended test method to IDEM, OAM for approval along with notice of the performance test that conforms to the schedule and procedures in 40 CFR 63.7(c) (General Provisions). The Permittee may use Method 25A of 40 CFR Part 60, Appendix A, if:**

 - (A) An exhaust gas organic volatile matter concentration of 50 parts per million by volume (ppmv) or less is required to comply with Condition D.2.3(a): or**
 - (B) The organic volatile matter concentration at the inlet to the control system and the required level of control are such to result in exhaust gas organic volatile matter concentrations of 50 ppmv or less, or**
 - (C) Because of the high efficiency of the control device, the anticipated organic volatile matter concentration at the control device exhaust is 50 ppmv or less, regardless of inlet concentration.**
 - (vii) Each performance test shall consist of three separate runs; each run conducted for at least one hour under the conditions that exist when the affected source is operating under normal operating conditions. For the purpose of determining organic volatile matter concentrations and mass flow rates, the average of results of all runs shall apply.**

- (viii) Organic volatile matter mass flow rates shall be determined using Equation 20 in 40 CFR 63.828 (Subpart KK). A copy of Subpart KK is included with this permit.
 - (ix) Emission control device efficiency shall be determined using Equation 21 in 40 CFR 63.828 (Subpart KK).
 - (x) The Permittee shall record such process information as may be necessary to determine the conditions of the performance test. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.
 - (xi) For the purpose of determining the value of the oxidizer operating parameter that will demonstrate continuing compliance, the time-weighted average of the values recorded during the performance test shall be computed. The Permittee shall establish as the operating parameter the minimum combustion temperature.
- (2) A performance test to determine the capture efficiency (F) of the capture system venting organic emissions to the thermal oxidizer TO-2 shall be conducted in accordance with the following:
- (i) For a permanent total enclosure, capture efficiency shall be assumed as 100 percent. Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure as found in appendix B to 40 CFR 52.741 shall be used to confirm that an enclosure meets the requirements for permanent total enclosure.
 - (ii) For other than a permanent total enclosure, the capture efficiency shall be determined according to the protocol specified in 40 CFR 52.741(a)(4)(iii)(B).
 - (iii) As an alternative, the Permittee may use any capture efficiency protocol and test methods that satisfy the criteria of either the Data Quality Objective (DQO) or the Lower Confidence Limit (LCL) approach as described in Appendix A of 40 CFR Part 63, Subpart KK, the Printing and Publishing Industry NESHAP.
- (3) Calculate the overall organic HAP control efficiency, (R), achieved using the following equation:
- $$R = E \cdot F / 100$$
- (4) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameters established in accordance with the procedures in Condition D.2.10 whenever the coating line S-4 is operating.

- (5) The affected source is in compliance if the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with Condition D.2.10(a) for each three-hour period, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with Condition D.2.10(b) for each three hour period, and the overall organic HAP control efficiency, R, is 95 percent or greater.
- (b) As an alternative to the procedures in paragraph (a) of this condition, the Permittee may use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site-specific operating parameter to assure capture efficiency. Compliance shall be demonstrated by following the procedures listed below:

 - (1) Install continuous emission monitors to determine the total organic volatile matter mass flow rate (e.g., by determining the concentration of the vent gas in grams per cubic meter, and the volumetric flow rate in cubic meters per second, such that the total organic volatile matter mass flow rate in grams per second can be calculated and summed) at both the inlet to and the outlet from the control device, such that the percent control efficiency (E) of the control device can be calculated for each month.
 - (2) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameter established in accordance with the procedures in Condition D.2.10(b) whenever the S-4 coating line is operated.
 - (3) Determine the capture efficiency (F) in accordance with the procedures in paragraph (a)(2) of this condition.
 - (4) Calculate the overall organic HAP control efficiency, (R), achieved for each month using the equation in paragraph (a)(3) of this condition.
 - (5) The affected source is in compliance if the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with for each three hour period, and the overall organic HAP control efficiency, R, is 95 percent or greater.

Comment #2

Colwell would like to continue the current quarterly reporting structure for CC-1. Since this line usage is relatively small compared to the other facilities in use, it would be quite onerous to report single HAPs as well as total HAPs on a monthly basis.

Response #2

Potential single HAP and total HAP emissions from the CC-1 coating line are greater than 10 and 25 tons per year, respectively. Therefore, to avoid the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control), the source has accepted a limitation on worst-case single HAP and total HAP usage of 165 and 400 tons per twelve (12) consecutive month period, rolled on a monthly basis, respectively. A minimum of 94% overall control efficiency for the thermal oxidizer, TO-1, which controls VOC and HAP emissions from this coating line, is also required. These limits will insure that emissions of the worst-case single HAP and total HAPs does not exceed 10 and 25 tons per year, respectively. Therefore, it is necessary for the source to keep records of worst-case single HAP and total HAP usages and to submit quarterly reports to demonstrate compliance with the usage limits. The report form will be revised to clarify that reporting is necessary for the worst-case single HAP usage and total HAP usage. (See revised report form on the last page of this addendum.)

Upon further review, the OAM has decided to make the following additional revisions to the permit:

1. Conditions D.2.5 and D.2.6 have been revised to clarify their intent. Also, a sentence has been added to condition D.2.5 to indicate that if the operating parameters necessary to maintain a 95% overall VOC control efficiency can be determined during the testing required by condition D.2.8, then compliance with condition D.2.5 would coincide with compliance with condition D.2.8.

D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

To demonstrate compliance with the minimum 95% overall control efficiency required by condition D.2.1, during the period between 0 and 6 months after issuance of Significant Source Modification No. 113-11120-00019, the Permittee shall perform VOC testing on the thermal oxidizer, TO-2, by a method approved by the Commissioner, to determine the minimum operating temperature that will achieve 95.0% overall efficiency for this oxidizer. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance. **Compliance with this condition can coincide with compliance with condition D.2.8.**

D.2.6 Volatile Organic Compounds (VOC)

Compliance with the VOC content **limit** contained in Condition D.2.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

2. Condition D.2.9 (b) has been deleted and replaced by a new condition D.2.10 to more clearly state the PMACT requirements as follows. All subsequent conditions in section D.2 have been re-numbered accordingly.

D.2.9 Volatile Organic Compound Control

~~(a)~~ When operating, the thermal oxidizer shall maintain a minimum operating temperature of 1300°F or a temperature determined in the most recent compliance stack tests to maintain at least 95.0% overall control efficiency. The temperature of the burner of the thermal oxidizer shall be continuously monitored and recorded whenever any of the facilities are in operation. Compliance with this condition shall deem 326 IAC 8-2-5 satisfied.

~~(b)~~ Since the source is using a thermal oxidizer and PTE to comply with the PMACT requirements for coating line S-4, the following monitoring requirements shall apply pursuant to 40 CFR 63.828(a)(4) and (5):

- _____ (1) ~~An owner or operator complying with the requirements through the use of an oxidizer and demonstrating continuous compliance through monitoring of an oxidizer operating parameter shall:~~
- _____ (i) ~~For an oxidizer other than a catalytic oxidizer, install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of +1 percent of the temperature being monitored in °C or +1 °C, whichever is greater. The thermocouple or temperature sensor shall be installed in the combustion chamber at a location in the combustion zone.~~
- _____ (2) ~~An owner or operator complying with the requirements through the use of a control device and demonstrating continuous compliance by monitoring an operating parameter to ensure that the capture efficiency measured during the initial compliance test is maintained, shall:~~
- _____ (i) ~~Submit to the Administrator a plan that:~~
- _____ (A) ~~Identifies the operating parameter to be monitored to ensure that the capture efficiency measured during the initial compliance test is maintained;~~
- _____ (B) ~~Discusses why this parameter is appropriate for demonstrating ongoing compliance, and~~
- _____ (C) ~~Identifies the specific monitoring procedures;~~
- _____ (ii) ~~Set the operating parameter value, or range of values, that demonstrate compliance with PMACT, and~~
- _____ (iii) ~~Conduct monitoring in accordance with the plan submitted to the Administrator unless comments received from the Administrator require an alternate monitoring scheme.~~

D.2.10 New Source Toxics Control [326 IAC 2-4.1-1]

Following the date on which the initial performance test of the thermal oxidizer TO-2 is completed, to demonstrate continuing compliance with Condition D.2.3(a), the Permittee shall monitor and inspect the oxidizer to ensure proper operation and maintenance by implementing the following:

- (a) Install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of +/-1 percent of the temperature being monitored in degrees Celsius or +/-1 degrees Celsius, whichever is greater. The thermocouple or temperature sensor shall be installed in the combustion chamber at a location in the combustion zone.**
- (b) Monitor an operating parameter to ensure that the capture efficiency measured during the initial compliance test is maintained. The Permittee shall:**

 - (1) Submit to IDEM, OAM a plan that:**

 - (i) Identifies the operating parameter to be monitored to ensure that the capture efficiency measured during the initial compliance test is maintained;**
 - (ii) Discusses why this parameter is appropriate for demonstrating ongoing compliance; and**

- (iii) **Identifies the specific monitoring procedures;**
 - (2) **Set the operating parameter value, or range of values, that demonstrate compliance with Condition D.2.3(a), and**
 - (3) **Conduct monitoring in accordance with the plan submitted to IDEM, OAM unless comments received from IDEM, OAM require an alternate monitoring scheme.**
 - (c) **Any excursion from the required operating parameters which are monitored in accordance with paragraphs (a) and (b) of this condition, unless otherwise excused, shall be considered a violation of the emission standard in Condition D.2.3(a).**
3. The record keeping requirements in condition D.2.10 (now re-numbered as D.2.11) have been revised to include records of HAP usage and HAP control device operating parameters. The revised condition now reads as follows:

D.2.10~~1~~ Record Keeping Requirements

- (a) The Permittee shall maintain records of the materials used that contain any VOCs **or HAPs**. The records shall be complete and sufficient to establish compliance with the VOC **and HAP** usage limits and/or the VOC **and HAP** emission limits established in conditions D.2.1, ~~and~~ D.2.2, **and D.2.3**. The records shall contain, as a minimum, the following information:
 - (1) The weight of VOC-containing **and HAP-containing** material used, including purchase orders and invoices necessary to verify the type and amount used.
 - (2) The VOC **and HAP** content (weight and volume percent) of each material used.
 - (3) The weight of VOCs **and HAPs** emitted for each compliance period, considering capture and destruction (or removal) efficiency.
 - (4) VOC **and HAP** control device and capture system operating parameter data for each month, such as:
 - (i) Capture efficiency;
 - (ii) Destruction (or removal) efficiency;
 - (iii) Data used to establish the capture and destruction (or removal) efficiencies; and
 - (iv) Temperature readings.

4. The portion of the state rule applicability section of the TSD which discusses the applicability of 326 IAC 2-4.1-1 (New Source Toxics Control) has been revised to reflect the changes noted above. The section now reads as follows:

326 IAC 2-4.1-1 (New Source Toxics Control)

Pursuant to 326 IAC 2-4.1-1 (New Source Toxics Control), any new process or production unit which in and of itself emits or has the potential to emit (PTE) 10 tons per year of any HAP or 25 tons per year of the combination of HAPs, and is constructed or reconstructed after July 27, 1997, must be controlled using technologies consistent with Maximum Achievable Control Technology (MACT).

- (a) This source will limit single and total HAP usage in the new coating line, CC-1, to 165 and 400 tons per twelve (12) consecutive month period, rolled on a monthly basis, respectively. Also, the existing thermal oxidizer (TO-1) shall be in operation at all times that the coating line CC-1 is in operation and shall maintain a minimum overall control efficiency of 94.0%. This limit will limit single and total HAP emissions to less than 10 and 25 tons per year, respectively, in coating line CC-1 so that 326 IAC 2-4.1-1 does not apply.
- (b) Since single and total HAP emissions in coating line S-4 cannot be limited to less than 10 and 25 tons per year, respectively, this coating line is subject to the requirements of this rule. Pursuant to this rule, HAP emissions must be controlled using MACT. The MACT standard for the Paper and Other Web Coating source category is scheduled for promulgation in 2000. Currently for this source category, a presumptive MACT (PMACT) determination has been made by the EPA with stakeholder input from Federal, State, and local environmental agencies and industry representatives based on readily available industry data. This PMACT applies to those facilities in which a coating is applied to a web substrate and is subsequently air dried, cured in an oven, or cured by radiation. Since the coating line S-4 applies coating to a web substrate, in this case paper, which is subsequently cured in an oven, the PMACT requirements will apply. A complete discussion on how the PMACT determination was made for the paper and other web coating source category can be found in the EPA document entitled "Presumptive Maximum Achievable Control Technology for the Paper and Other Web Coating Source Category", EPA, Office of Air Quality Planning and Standards, (OAQPS), Emission Standards Division, Coatings and Consumer Products Group, May 1997.

Based on the currently available data and comments from the stakeholders involved, presumptive MACT for HAP emissions from Paper and Other Web Coating, which shall apply to coating line S-4, is any one or combination of the following:

- (1) At least 95-99 percent overall **organic HAP** control efficiency (capture and control) using an add-on control device for emissions from a coating line, as calculated over a calendar month; or
- (2) no more than 0.20 kg HAP applied per kg coating solids applied, as calculated on a weighted average basis for each calendar month for all coatings used; or
- (3) no more than 0.20 kg HAP emitted per kg coating solids applied, as calculated on a weighted average **basis** for all coatings used each calendar month.

An overall control efficiency range of 95-99 percent was provided because, although it has been acknowledged that current technology has resulted in overall emission reductions as high as 99 percent, the extent of this level of control efficiency within the industry is currently unknown. It is intended that presenting overall control efficiency levels as a range will allow for the use of traditional as well as innovative control technologies. Various technology options are thereby allowed, including, but not limited to, thermal and catalytic oxidizers, carbon adsorbers, solvent recovery systems, bioreactors, etc. It is also assumed that 100 percent capture efficiency is achievable and reasonable, since a number of facilities currently are known to achieve 100 percent capture using permanent total enclosures (PTE). The regulatory subgroup, consisting of the EPA project team and EPA Regional and State/Local Agency representatives, believes that PTE can readily be installed on new coating lines that are subject to case-by-case MACT under Section 112(g).

This source will use a thermal oxidizer, identified as TO-2, with a minimum overall control efficiency of 95% as PMACT to comply with this rule. A permanent total enclosure (PTE) shall also be installed to achieve 100 percent capture. **to comply with this rule.**

Compliance options for emission limitation (1) listed above can be established using the Printing and Publishing NESHAP, 40 CFR Part 63, Subpart KK as a guide.

Pursuant to 40 CFR 63, Subpart KK, each owner or operator using an oxidizer to control emissions shall show compliance by following the procedures in either paragraph (d)(1) or (d)(2) of 40 CFR 63.825. Since this source will demonstrate compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters per 40 CFR 63.825(d)(1), the source shall follow the procedures listed below:

- _____ (1) Determine the oxidizer destruction efficiency (E) using the procedure in 40 CFR 63.827(d).
- _____ (2) Determine the capture system capture efficiency (F) in accordance with 40 CFR 63.827(e)-(f). Note that since the source must install a PTE, capture efficiency shall be assumed as 100 percent. Procedure T-Criteria for and Verification of a Permanent or Temporary Total Enclosure as found in appendix B to 40 CFR 52.741 of part 52 of this chapter shall be used to confirm that an enclosure meets the requirements for permanent total enclosure.
- _____ (3) Calculate the overall organic HAP control efficiency, (R), achieved using the following equation:

$$R = EF/100$$

_____ where: E = VOC destruction efficiency
_____ F = VOC capture efficiency
- _____ (4) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameters established in accordance with 40 CFR 63.828(a)(4)-(5).

- ~~(5) The affected source is in compliance, if the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with 40 CFR 63.828(a)(4) for each three-hour period, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with 40 CFR 63.828(a)(5) for each three-hour period, and the overall organic HAP control efficiency, R, is 95 percent or greater.~~

To demonstrate compliance with the 95% overall organic HAP control efficiency requirement, the Permittee shall follow the procedures in either paragraph (1) or (2) listed below:

- (1) Demonstrate initial compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters by following the procedures listed below:**
 - (A) An initial performance test to establish the destruction efficiency (E) and the associated combustion zone temperature for the thermal oxidizer TO-2 shall be conducted and the data reduced in accordance with the following reference methods and procedures:**
 - (i) Method 1 or 1A of 40 CFR part 60, appendix A is used for sample and velocity traverses to determine sampling locations.**
 - (ii) Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A is used to determine gas volumetric flow rate.**
 - (iii) Method 3 of 40 CFR part 60, appendix A is used for gas analysis to determine dry molecular weight.**
 - (iv) Method 4 of 40 CFR part 60, appendix A is used to determine stack gas moisture.**
 - (v) Methods 2, 2A, 3, and 4 of 40 CFR part 60, appendix A shall be performed, as applicable, at least twice during each test period.**
 - (vi) Method 25 of 40 CFR part 60, Appendix A, shall be used to determine organic volatile matter concentration, except as provided in (a) to (c) below. The Permittee shall submit notice of the intended test method to IDEM, OAM for approval along with notice of the performance test that conforms to the schedule and procedures in 40 CFR 63.7(c) (General Provisions). The Permittee may use Method 25A of 40 CFR Part 60, Appendix A, if:**
 - (a) An exhaust gas organic volatile matter concentration of 50 parts per million by volume (ppmv) or less is required to comply with the PMACT requirements: or**

- (b) The organic volatile matter concentration at the inlet to the control system and the required level of control are such to result in exhaust gas organic volatile matter concentrations of 50 ppmv or less, or
 - (c) Because of the high efficiency of the control device, the anticipated organic volatile matter concentration at the control device exhaust is 50 ppmv or less, regardless of inlet concentration.
 - (vii) Each performance test shall consist of three separate runs; each run conducted for at least one hour under the conditions that exist when the affected source is operating under normal operating conditions. For the purpose of determining organic volatile matter concentrations and mass flow rates, the average of results of all runs shall apply.
 - (viii) Organic volatile matter mass flow rates shall be determined using Equation 20 in 40 CFR 63.828 (Subpart KK). A copy of Subpart KK is included with the permit.
 - (ix) Emission control device efficiency shall be determined using Equation 21 in 40 CFR 63.828 (Subpart KK).
 - (x) The Permittee shall record such process information as may be necessary to determine the conditions of the performance test. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.
 - (xi) For the purpose of determining the value of the oxidizer operating parameter that will demonstrate continuing compliance, the time-weighted average of the values recorded during the performance test shall be computed. The Permittee shall establish as the operating parameter the minimum combustion temperature.
- (B) A performance test to determine the capture efficiency (F) of the capture system venting organic emissions to the thermal oxidizer TO-2 shall be conducted in accordance with the following:
- (i) For a permanent total enclosure, capture efficiency shall be assumed as 100 percent. Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure as found in appendix B to 40 CFR 52.741 shall be used to confirm that an enclosure meets the requirements for permanent total enclosure.
 - (ii) For other than a permanent total enclosure, the capture efficiency shall be determined according to the protocol specified in 40 CFR 52.741(a)(4)(iii)(B).

- (iii) **As an alternative, the Permittee may use any capture efficiency protocol and test methods that satisfy the criteria of either the Data Quality Objective (DQO) or the Lower Confidence Limit (LCL) approach as described in Appendix A of 40 CFR Part 63, Subpart KK, the Printing and Publishing Industry NESHAP.**
- (C) **Calculate the overall organic HAP control efficiency, (R), achieved using the following equation:**

 $R = E \cdot F / 100$
- (D) **Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameters established in accordance with the procedures in 40 CFR 63.828(a)(4)-(5) whenever the coating line S-4 is operating.**
- (E) **The affected source is in compliance if the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with the procedures in 40 CFR 63.828(a)(4) and (5) for each three-hour period, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with Condition D.2.10(b) of the permit for each three hour period, and the overall organic HAP control efficiency, R, is 95 percent or greater.**
- (2) **As an alternative to the procedures in paragraph (1) listed above, the Permittee may use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site-specific operating parameter to assure capture efficiency. Compliance shall be demonstrated by following the procedures listed below:**
 - (A) **Install continuous emission monitors to determine the total organic volatile matter mass flow rate (e.g., by determining the concentration of the vent gas in grams per cubic meter, and the volumetric flow rate in cubic meters per second, such that the total organic volatile matter mass flow rate in grams per second can be calculated and summed) at both the inlet to and the outlet from the control device, such that the percent control efficiency (E) of the control device can be calculated for each month.**
 - (B) **Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameter established in accordance with the procedures in Condition D.2.10(b) whenever the S-4 coating line is operated.**
 - (C) **Determine the capture efficiency (F) in accordance with the procedures in paragraph (1)(B) above.**
 - (D) **Calculate the overall organic HAP control efficiency, (R), achieved for each month using the equation in paragraph (1)(C) above.**

- (E) The affected source is in compliance if the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with for each three hour period, and the overall organic HAP control efficiency, R, is 95 percent or greater.

5. The Compliance Requirements section of the TSD for emission unit S-4 is revised as follows:

2. The coating line S-4 has applicable compliance monitoring conditions as specified below:

(a) ~~Since the source is using a thermal oxidizer and a permanent total enclosure (PTE) to comply with the PMACT requirements for coating line S-4, the following monitoring requirements shall apply pursuant to 40 CFR 63.828(a)(4) and (5):~~

~~(1) An owner or operator complying with the requirements through the use of an oxidizer and demonstrating continuous compliance through monitoring of an oxidizer operating parameter shall:~~

~~(i) For an oxidizer other than a catalytic oxidizer, install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of ± 1 percent of the temperature being monitored in $^{\circ}\text{C}$ or $\pm 1^{\circ}\text{C}$, whichever is greater. The thermocouple or temperature sensor shall be installed in the combustion chamber at a location in the combustion zone.~~

~~(2) An owner or operator complying with the requirements through the use of a control device and demonstrating continuous compliance by monitoring an operating parameter to ensure that the capture efficiency measured during the initial compliance test is maintained, shall:~~

~~(i) Submit to the Administrator a plan that:~~

~~(A) Identifies the operating parameter to be monitored to ensure that the capture efficiency measured during the initial compliance test is maintained;~~

~~(B) Discusses why this parameter is appropriate for demonstrating ongoing compliance, and~~

~~(C) Identifies the specific monitoring procedures;~~

~~(ii) Set the operating parameter value, or range of values, that demonstrate compliance with PMACT, and~~

~~(iii) Conduct monitoring in accordance with the plan submitted to the Administrator unless comments received from the Administrator require an alternate monitoring scheme.~~

Following the date on which the initial performance test of the thermal oxidizer TO-2 is completed, to demonstrate continuing compliance with the 95% overall organic HAP control efficiency requirement, the Permittee shall monitor and inspect the oxidizer to ensure proper operation and maintenance by implementing the following:

(a) Install, calibrate, operate, and maintain a temperature monitoring device

equipped with a continuous recorder. The device shall have an accuracy of ± 1 percent of the temperature being monitored in degrees Celsius or ± 1 degrees Celsius, whichever is greater. The thermocouple or temperature sensor shall be installed in the combustion chamber at a location in the combustion zone.

- (b) Monitor an operating parameter to ensure that the capture efficiency measured during the initial compliance test is maintained. The Permittee shall:**

 - (1) Submit to IDEM, OAM a plan that:**

 - (i) Identifies the operating parameter to be monitored to ensure that the capture efficiency measured during the initial compliance test is maintained;**
 - (ii) Discusses why this parameter is appropriate for demonstrating ongoing compliance; and**
 - (iii) Identifies the specific monitoring procedures;**
 - (2) Set the operating parameter value, or range of values, that demonstrate compliance with the 95% overall organic HAP control efficiency requirement, and**
 - (3) Conduct monitoring in accordance with the plan submitted to IDEM, OAM unless comments received from IDEM, OAM require an alternate monitoring scheme.**
- (b)(c) When operating, the thermal oxidizer must maintain a minimum operating temperature of 1300°F or a temperature determined in the most recent compliance stack test to maintain at least a 95.0% overall control efficiency.**
- (e)(d) For each coating, the gallons applied, density, and percent VOC and HAP content by weight and volume, must be monitored and recorded daily.**

These monitoring conditions are necessary because the thermal oxidizer for the paper coating line S-4 must operate properly to ensure compliance with 326 IAC 8-2-5 (Paper Coating Operations), 326 IAC 2-7 (Part 70), and 326 IAC 2-4.1-1 (New Source Toxics Control), and to avoid the requirements of 326 IAC 2-2 (PSD).

The Changes Proposed section of the TSD has also been revised to show the revised conditions of the Title V permit as listed above.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR MANAGEMENT COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Colwell/General, Inc.
 Source Address: 231 South Progress Drive East, Kendallville, Indiana 46755-3269
 Mailing Address: P.O. Box 218, Kendallville, Indiana 46755-0218
 Part 70 Permit No.: T113-6020-00019
 Facility: rollcoating paper application system CC-1
 Parameter: Single HAP and Total HAP
 Limit: The total input of any single HAP and any combination of HAPs, including coatings, dilution solvents, and cleaning solvents, to the rollcoating paper coating application system, CC-1, shall be limited to 165 and 400 tons per twelve (12) consecutive month period, rolled on a monthly basis, respectively. HAP emissions from the rollcoating paper coating application system shall be controlled by the thermal oxidizer, TO-1, that maintains a minimum overall control efficiency of 94.0%.

YEAR: _____

Month	Worst-Case Single HAP Usage This Month (tons)	Total HAP Usage This Month (tons)	Worst-Case Single HAP Usage Previous 11 Months (tons)	Total HAP Usage Previous 11 Months (tons)	12 Month Worst-Case Single HAP Usage (tons)	12 Month Total HAP Usage (tons)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
 Deviation has been reported on: _____

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Appendix A: Emission Calculations Summary

Company Name: Colwell/General, Inc.
Address City IN Zip: 231 South Progress Drive East, Kendallville, Indiana 46755
Source Modification No.: 113-11120
Plt ID: 113-00019
Reviewer: Trish Earls/EVP
Date: July 2, 1999

Potential Emissions (tons/year)			
Emissions Generating Activity			
Pollutant	Surface Coating	Natural Gas Combustion	TOTAL**
PM	0.00	0.04	0.04
PM10	0.00	0.14	0.14
SO2	0.00	0.01	0.01
NOx	0.00	1.91	1.91
VOC	1,253.82	0.10	1,253.92
CO	0.00	1.60	1.60
total HAPs	720.90	negl.	720.90
worst case single HAP	341.53	negl.	341.53
Total emissions based on rated capacity at 8,760 hours/year.			
Controlled Emissions (tons/year)			
Emissions Generating Activity			
Pollutant	Surface Coating	Natural Gas Combustion	TOTAL**
PM	0.00	0.04	0.04
PM10	0.00	0.14	0.14
SO2	0.00	0.01	0.01
NOx	0.00	1.91	1.91
VOC	39.00	0.10	39.10
CO	0.00	1.60	1.60
total HAPs	36.48	negl.	36.48
worst case single HAP	17.38	negl.	17.38
Total emissions based on rated capacity at 8,760 hours/year.			

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations**

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Company Name: Colwell/General, Inc.
Address City IN Zip: 231 South Progress Drive East, Kendallville, Indiana 46755
Source Modification No.: 113-11120
PIT ID: 113-00019
Reviewer: Trish Earls/EVP
Date: July 2, 1999

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Maximum Usage (gal/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
CC-1 Coating Line															
Lacquer Paint	9.00	66.46%	0.0%	66.5%	0.0%	22.55%	4.00000	5.98	5.98	23.93	574.21	104.79	0.00	26.53	100%
SB5000 (Clean Up Solvent)	6.80	100.00%	0.0%	100.0%	0.0%	0.00%	1.00000	6.80	6.80	6.80	163.20	29.78	0.00	N/A	100%
S-4 Coating Line															
Lacquer Paint	9.03	58.47%	0.0%	58.5%	0.0%	27.62%	48.00000	5.28	5.28	253.43	6082.38	1110.03	0.00	19.12	100%
SB5000 (Clean Up Solvent)	6.80	100.00%	0.0%	100.0%	0.0%	0.00%	0.30900	6.80	6.80	2.10	50.43	9.20	0.00	N/A	100%
Total State Potential Emissions:										286.26	6870.22	1253.82	0.00		
Federal Potential Emissions (controlled):															
				Coating Line	Material Usage Limitation	Equivalent VOC Usage Limit * (tons/yr)	Control Device ID	Control Efficiency:		Controlled VOC lbs per Hour	Controlled VOC lbs per Day	Controlled VOC tons per Year	Controlled PM tons/yr		
								VOC	PM						
								CC-1	60.90%						
				S-4	60.90%	681.62	TO-2	95.00%	0.00%	8.90	213.69	39.00	0.00		

Note: VOC emissions from the CC-1 coating line are controlled by the existing thermal oxidizer (TO-1). VOC emissions from the S-4 coating line are controlled by the new thermal oxidizer (TO-2).

* The VOC usage limit includes VOC from coating and cleaning solvent.

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)

Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)

Total = Worst Coating + Sum of all solvents used

Appendix A: Emissions Calculations

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Company Name: Colwell/General, Inc.
Address City IN Zip: 231 South Progress Drive East, Kendallville, Indiana 46755
Source Modification No.: 113-11120
Pit ID: 113-00019
Reviewer: Trish Earls/EVP
Date: July 2, 1999

326 IAC 8-1-2 Compliance Calculation

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Pounds VOC per gallon of coating less water	L	D	E	V	O
								326 IAC 8-2-5 Emission Limit (lbs VOC/gal coating less water)	Density of VOC in coating (lbs VOC/gal VOC)	326 IAC 8-1-2(b) Equivalent Emission Limit (lbs VOC/gal coating solids)	Actual VOC content of the coating (lb VOC/gal coating solids)	Required Overall Control Efficiency per 326 IAC 8-1-2(c)
CC-1 Coating Line*												
Lacquer Paint	9.00	66.46%	0.0%	66.5%	0.0%	22.55%	5.98	2.9	7.36	4.79	26.53	81.96%
S-4 Coating Line**												
Lacquer Paint	9.03	58.47%	0.0%	58.5%	0.0%	27.62%	5.28	2.9	7.36	4.79	19.12	74.97%

*The above calculation demonstrates that the existing thermal oxidizer (TO-1) controlling emissions from the CC-1 coating line must operate at an overall control efficiency of 81.96% to comply with 326 IAC 8-1-2 and 326 IAC 8-2-5 for this coating. Pursuant to T113-6020-00019, issued on Oct. 6, 1998, the existing thermal oxidizer must operate at an overall control efficiency of 90.3% to comply with 326 IAC 8-1-2 and 326 IAC 8-2-5. However, the minimum required control efficiency for TO-1 will be revised in this SSM to 94% so that VOC emissions from this modification are limited to less than 40 tons per year so that the requirements of 326 IAC 2-2 (PSD) do not apply.

**The above calculation demonstrates that the new thermal oxidizer (TO-2) controlling emissions from the S-4 coating line must operate at an overall control efficiency of 74.97% to comply with 326 IAC 8-1-2 and 326 IAC 8-2-5 for this coating. However, to comply with the presumptive MACT determination, and to avoid the requirements of 326 IAC 2-2(PSD), the new thermal oxidizer will be required to operate at a minimum overall control efficiency of 95%.

**Appendix A: Emission Calculations
HAP Emission Calculations**

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Company Name: Colwell/General, Inc.
Address City IN Zip: 231 South Progress Drive East, Kendallville, Indiana 46755
Source Modification No.: 113-11120
Plt ID: 113-00019
Reviewer: Trish Earls/EVP
Date: July 2, 1999

Material	Density (Lb/Gal)	Maximum Usage (gal/hour)	Material Usage Limitation	Weight % Ethylbenzene	Weight % Xylene	Weight % Toluene	Weight % MEK	Weight % DEHP	Ethylbenzene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	MEK Emissions (ton/yr)	DEHP Emissions (ton/yr)
CC-1 Coating Line													
Lacquer Paint	9.00	4.00000	60.90%	1.10%	5.20%	26.80%	7.10%	0.00%	1.06	4.99	25.74	6.82	0.00
Clean Up Solvent	6.80	1.00000	60.90%	0.00%	0.00%	25.03%	0.00%	0.00%	0.00	0.00	4.54	0.00	0.00
S-4 Coating Line													
Lacquer Paint	9.03	48.00000	60.90%	2.10%	10.80%	26.80%	13.80%	5.00%	24.28	124.87	309.85	159.55	57.81
Clean Up Solvent	6.80	0.30900	60.90%	0.00%	0.00%	25.03%	0.00%	0.00%	0.00	0.00	1.40	0.00	0.00
Total State Potential Emissions:									25.34	129.86	341.53	166.37	57.81

TO-1 VOC Control Efficiency	TO-2 VOC Control Efficiency	Ethylbenzene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	MEK Emissions (ton/yr)	DEHP Emissions (ton/yr)
94.00%	95.00%	1.28	6.54	17.38	8.39	2.89

Total Controlled Emissions:

METHODOLOGY

Total Controlled Emissions: **36.48**

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Controlled HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs * (1-Control Efficiency (%))

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Colwell/General, Inc.
Address City IN Zip: 231 South Progress Drive East, Kendallville, Indiana 46755
Source Modification No.: 113-11120
Pit ID: 113-00019
Reviewer: Trish Earls/EVP
Date: July 2, 1999

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

4.35

38.1

Heat Input Capacity includes one (1) 1.35 MMBtu/hr curing oven, and the supplementary fuel heat input rate of 3.0 MMBtu/hr for TO-2.

Pollutant						
Emission Factor in lb/MMCF	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.04	0.14	0.01	1.91	0.10	1.60

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).